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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/731,194 | 12/06/2000 | Harpreet Singh Sawhney | SAR 13800 | 8583 |

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| EXAMINER |
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VO, TUNG T

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| ART UNIT | PAPER NUMBER |
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2613

DATE MAILED: 04/22/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/731,194

Applicant(s)

SAWHNEY ET AL.

Examiner

Tung T. Vo

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,12,15,16,18-22,26-28, 31, and 36-39 is/are rejected.
- 7) ☒ Claim(s) 3, 8-11, 13-14, 17, 23-25, 29-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1, 5, 15, and 20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-7, 12, 15-16, 18-22, 26-28, 31, and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 6,097,842) in view of Tanoi (US 5,121,202).

Re claims 1-2, 4-7, 12, 15-16, 18-22, 26-28, and 31, Suzuki discloses an encoder (figs. 1-5, 10, and 12) for encoding a video stream (1 of fig. 12), the encoder comprises: a frame/regions type selector (21 of fig. 15) for selecting different processing paths (lower layer picture, upper layer picture, and key signals) for encoding (22 and 25 of fig. 15) different frames/regions into encoded video stream (bitstream, the output of the multiplexer 26); a first processing path (25 of fig. 15, and fig. 22) configured for encoding, into the encoded video stream, a first original frame/region (upper layer) in the video stream using intra-frame coding to generate an encoded first frame/regions; and a second processing path (23 of fig. 12, and fig. 23) configured for encoding, into the encoded video bitstream, a second original frame/region (upper layer) using

motion-based prediction coding (LOWER LAYER MOTION VECTOR PREDICTION MODE of fig. 23), wherein the video encoder has an encoding mode (42 of fig. 23) in which at some motion information used (32 of fig. 23) during motion-based predictive coding. Suzuki further disclose an encoder (figs. 1-5, 10, and 12) for encoding a video stream (1 of fig. 12), the encoder comprises: a frame/regions type selector (21 of fig. 15) for selecting different processing paths (lower layer picture, upper layer picture, and key signals) for encoding (22 and 25 of fig. 15) different frames/regions into encoded video stream (bitstream, the output of the multiplexer 26); a first processing path (25 of fig. 15, and fig. 22) configured for encoding, into the encoded video stream, a first original frame/region (lower layer) in the video stream using intra-frame coding to generate an encoded first frame/regions; and a second processing path (23 of fig. 12, and fig. 23) configured for encoding, into the encoded video bitstream, a second original frame/region (upper layer) using motion-based prediction coding (LOWER LAYER MOTION VECTOR PREDICTION MODE of fig. 22), wherein the video encoder has an encoding mode (42 of fig. 22) in which at least some motion information used (32 of fig. 22) . Suzuki also teaches the decoder that is reversible of the encoding process (figs. 29-31). Suzuki further discloses a third processing path configured for encoding, into the encoded video bitstream, a third original frame/region in the video stream tweening (the applicant discloses video stream tweening is an interpolating process) based on the motion used to encode the second original frame/region (24 of fig. 15, e.g. the lower decoded frame/region is enlarged (interpolated) by the resolution conversion 24 and the enlarged or interpolated frame/region to the encoder 23 of fig. 23). Suzuki further discloses a decoder (figs. 6-8, 11 and 27-31) decodes the encoded video bitstream. The decoding process is reversible of the encoding process as disclosed in Suzuki (cols. 5-7, 27-30).

It is noted that Suzuki does not teach at least some motion information used during motion based-predictive coding is excluded from encoded video bitstream as claimed.

However, Tanoi teaches at least some motion information used during motion based-predictive coding is excluded from encoded video bitstream (12 and 22 of fig. 1, e.g. the motion vector is multiplexed to the encoded video signal for transmitting). Therefore, taking the teachings of Suzuki and Tanoi as a whole, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Tanoi into the encoder of Suzuki for the same purpose transmitting the motion vector that is excluded from encoded video signal. Doing so would provide inter-frame prediction encoding and decoding technique for video communication that is less liable to fitfulness.

Re claims 36-39, Suzuki further discloses motion computation during which one or more motion vectors are determined for the second original frame/region (42 of figs. 22 and 23), motion compensation based on the one or more motion vectors determined during motion computation (42 of fig. 2), wherein at least one of the motion vectors using the motion compensation (VLC 26 of fig. 22).

Allowable Subject Matter

4. Claims 3, 8-11, 13-14, 17, 23-25, 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the previous Office Action, Paper No. 8.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung T. Vo whose telephone number is (703) 308-5874. The examiner can normally be reached on 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris. Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TUNG T. VO
PATENT EXAMINER

T.Vo

Tung T. Vo
Examiner
Art Unit 2613